CLAIMS

What is claimed is:

1. A shield comprising:

an attachment mechanism disposed on an outer surface to attach the shield to a joint of a boreless compressor wheel; and

a passage extending from a proximate end of the shield to a distal end of the shield.

2. The shield of claim 1 wherein the attachment mechanism comprises threads.

3. The shield of claim 1 wherein the passage provides access to an end surface of a joint of a boreless compressor wheel when the shield is inserted at least partially in the joint.

4. The shield of claim 1 comprising a resin.

5. The shield of claim 4 wherein the resin comprises a polymer.

6. The shield of claim 1 wherein the attachment mechanism comprises an outer surface capable of being in contact with a surface of a joint of a boreless compressor wheel.

7. The shield of claim 1 wherein the shield prevents material entering the passage from contacting a pilot surface of a joint of a boreless compressor wheel.

8. The shield of claim 1 wherein the shield prevents material entering the passage from contacting an attachment mechanism a joint of a boreless compressor wheel.

9. The shield of claim 1 further comprising a base portion that includes an attachment mechanism to attach the shield to a fitting of a tube associated with a cold working process.

10. The shield of claim 1 further comprising a base portion that includes one or more openings that allow material associated with a cold working process to exit the passage.

11. The shield of claim 1 further comprising a pressure fit surface positioned proximate to the distal end of the shield to form a pressure fit with a surface of a joint of a boreless compressor wheel.

12. The shield of claim 1 further comprising a boreless compressor wheel.

13. An assembly comprising:

a boreless compressor wheel that includes a joint; and

a shield that comprises an attachment mechanism disposed on an outer surface to attach the shield to the joint and a passage extending from a proximate end of the shield to a distal end of the shield.

14. The assembly of claim 13 wherein the passage allows material associated with a cold working process to contact an end surface of the joint without contacting one or more other surfaces of the joint.

15. A boreless compressor wheel comprising a joint that includes an end surface at least partially treated by a cold working process.

16. The boreless compressor wheel of claim 15 further comprising one or more surfaces untreated by the cold working process.

17. The boreless compressor wheel of claim 15 further comprising a shaft inserted at least partially in the joint.

18. A method comprising:

inserting a shield at least partially in a joint of a boreless compressor wheel; and

treating, at least partially, an end surface of the joint to thereby reduce fatigue of the boreless compressor wheel.

19. The method of claim 18 wherein the treating comprises a cold working process.

20. The method of claim 18 wherein the treating comprises shot-peening.

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21. The method of claim 18 wherein the inserting comprises rotating.